

CODE OF FEDERAL REGULATIONS

1949 Edition

CONTAINING A CODIFICATION OF DOCUMENTS OF GENERAL
APPLICABILITY AND FUTURE EFFECT AS OF DECEMBER 31, 1948

With Ancillaries and Index

Published by the Division of the Federal Register, the National Archives
as a Special Edition of the Federal Register, Dated January 1, 1949
Pursuant to Section 11 of the Federal Register Act as Amended



TITLE 47—TITLE 48

(b) Additional channels for use by Provisional stations are to be designated in the 25–30 Mc band, and may be designated in the following television channels: 44–50; 54–60; 60–66; 66–72; 76–82; 186–192; 192–198; 198–204; 204–210; and 210–216 Mc. Frequencies designated in the television channels will be assigned on a mutually non-interfering basis.

(c) Upon proper showing of need, the Commission may authorize the use of one or more additional frequencies for use by Provisional stations, with appropriate emission and power, upon the condition that interference will not be caused to any other service and under such restrictions as may be deemed necessary. [12 F. R. 4350]

§ 11.123 *Scope of service.* A provisional station is authorized to engage in communications pertaining to the safety of life or property; *Provided*, That upon proper showing of need, a provisional station may be authorized, on a secondary basis, to engage in other essential communications under restrictions and conditions set forth in the instrument of authorization. [7 F. R. 4276]

§ 11.124 *Conditions of service.* (a) The licensee of a provisional station, upon reasonable demand by any member of the public, shall provide such communication as is permitted within the scope of service defined in § 11.123 and within the limitations of the station license and the radio communication facilities available.

(b) Provisional stations shall not operate as common carriers of communication for hire. However, licensees of provisional stations may accept contributions to capital and operating expenses from others who, under the Commission's rules, would be eligible as licensees for provisional stations, for the cooperative use of these stations on a cost-sharing basis: *Provided*, That contracts for such cooperative use are submitted to the Commission 30 days prior to the effective date thereof and that said contracts are not disapproved by the Commission. [7 F. R. 4276]

§ 11.125 *Power.* A power exceeding 50 watts will not be authorized for provisional stations, except in cases where the applicant makes an adequate technical showing that because of exceptional conditions a power of 50 watts is

insufficient to provide satisfactory communication. [7 F. R. 4276]

§ 11.126 *Avoidance of interference.* Provisional stations shall take all reasonable precautions, including listening tests, to avoid unnecessary interference to the service of another station. [7 F. R. 4276]

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APPENDIX

AUTHORITY: §§ 12.1 to 12.162 issued under sec. 4, 48 Stat. 1066, as amended; 47 U. S. C. 154. Interpret or apply sec. 303, 48 Stat. 1082, as amended; 47 U. S. C. 303.

SOURCE: §§ 12.1 to 12.162 appear at 13 F. R. 7405.

DEFINITIONS

§ 12.1 *Amateur service.* The term "amateur service" means a radio service carried on by amateur stations.

§ 12.2 *Amateur operator.* The term "amateur operator" means a person interested in radio technique solely with a personal aim and without pecuniary interest, holding a valid license issued by the Federal Communications Commission authorizing him to operate licensed amateur stations.

§ 12.3 *Amateur station.* The term "amateur station" means a station used by an amateur operator, and it embraces all radio transmitting apparatus at a particular location used for amateur service and operated under a single instrument of authorization.

§ 12.4 *Amateur portable station.* The term "amateur portable station" means an amateur station that is so constructed that it may conveniently be moved about from place to place for communication, but which is not operated while in motion.

§ 12.5 *Amateur mobile station.* The term "amateur mobile station" means an amateur station that is so constructed that it may conveniently be transferred to or from a mobile unit or from one such unit to another, and is ordinarily used while such mobile unit is in motion.

§ 12.6 *Amateur radio communication.* The term "amateur radio communication" means radio communication between amateur stations solely with a personal aim and without pecuniary interest.

§ 12.7 *Remote control.* The term "remote control" as applied to the amateur radio service, means control of transmitting equipment of an amateur station from an operating position other than one at which the transmitter is in view and immediately accessible; except that, direct mechanical control or direct electrical control by wired connections of an amateur transmitter from a point located on board any aircraft, vessel or vehicle on which such transmitter is located shall not be considered remote control within the meaning of this definition.

AMATEUR OPERATORS

LICENSES; PRIVILEGES

§ 12.21 *Eligibility for license.* The following are eligible to apply for amateur operator license and privileges:

Class A. Any citizen of the United States who at any time prior to receipt of his application by the Commission has held, for a period of a year or more, an amateur operator license issued by the Commission.

Class B. Any citizen of the United States.

Class C. Any citizen of the United States whose actual residence, address, and amateur station are more than 125 miles air line distant from the nearest location at which examinations are held at intervals of not more than 3 months for class B amateur operator license; or who is shown by physician's cer-

tificate to be unable to appear for examination because of protracted disability; or who is shown by certificate of the commanding officer to be in the armed forces of the United States at a military, naval, or Coast Guard station and, for that reason, to be unable to appear for examination at the time and place designated by the Commission.

§ 12.22 *Application for amateur operator license.* Each application for amateur operator license shall comply with the Commission's rules and regulations and shall be made in writing on Form 610 (application for amateur operator and/or station license). The application shall be filed with the district field office of the Commission if personal appearance is required for operator examination. If personal appearance is not required, the application shall be sent instead to the Commission, Washington 25, D. C. All applications for class C operating privileges shall be sent to the Commission, Washington 25, D. C.

§ 12.23 *Classification of operating privileges.* Amateur operating privileges are classified as follows:

Class A. All authorized amateur privileges.

Class B or C. All authorized amateur privileges except the use of type A-3 emission on the frequency bands 3850 to 4000 kilocycles and 14200 to 14300 kilocycles.

§ 12.24 *Scope of operator authority.* Amateur operator licenses are valid only for the operation of licensed amateur stations; and, on a temporary basis, for the operation of experimental stations (except class two stations) in the experimental service licensed for operation exclusively on a frequency or frequencies above 450 megacycles if such services are performed without compensation, direct or indirect, paid or promised.

§ 12.25 *Availability of operator license.* The original operator license of each operator shall be kept in the personal possession of the operator while operating an amateur station. When operating an amateur station at a fixed location, however, the license may be posted in a conspicuous place in the room occupied by the operator. The license shall be available for inspection by any authorized Government official whenever the operator is operating an amateur station and at other times upon request made by an authorized representative of the Commission, except when such license has been filed with application for modification or renewal thereof, or has

been mutilated, lost, or destroyed, and application has been made for a duplicate license in accordance with § 12.26. No recognition shall be accorded to any photocopy of an operator license.

§ 12.26 *Duplicate license.* Any licensee applying for a duplicate license to replace an original which has been lost, mutilated, or destroyed, shall submit with the application the mutilated license or a statement setting forth the facts regarding the manner in which the original license was lost or destroyed. If, subsequent to receipt by the licensee of the duplicate license, the original license is found, either the duplicate or the original license shall be returned immediately to the Commission.

§ 12.27 *Renewal of amateur operator license.* An amateur operator license may be renewed upon proper application showing that within the last 6 months of the license term the licensee has lawfully operated an amateur station or stations licensed by the Commission, and has thereby communicated by radio telegraphy with at least three other such amateur stations in the United States. The applicant shall qualify for a new license by examination if the requirements of this section are not fulfilled. Application for renewal of an amateur operator license shall be filed not more than 120 days prior to date of expiration of such license and not later than the date of expiration.

§ 12.28 *Who may operate an amateur station.* An amateur station may be operated only by a person holding a valid amateur operator license, and then only to the extent provided for by the class of privileges granted under the license. When an amateur station is used for telephony, the station licensee may permit any person to transmit by voice, provided that during such transmission call signs are announced as prescribed by § 12.82 and a duly licensed amateur operator maintains actual control over the emissions, including turning the carrier on and off for each transmission and signing the station off after communication with each station has been completed.

§ 12.29 *License term.* An amateur operator license is valid normally for a period of 5 years from the date of issuance of a new, renewed, or modified license.

§ 12.30 *Order of suspension.* No order of suspension of any operator's license shall take effect until 15 days notice in writing thereof, stating the cause for the proposed suspension, has been given to the operator licensee who may make written application to the Commission at any time within said 15 days for a hearing upon such order. The notice to the operator licensee shall not be effective until actually received by him, and from that time he shall have 15 days in which to mail the said application. In the event that physical conditions prevent mailing of the application at the expiration of the 15-day period, the application shall then be mailed as soon as possible thereafter, accompanied by a satisfactory explanation of the delay. Upon receipt by the Commission of such application for hearing, said order of suspension shall be held in abeyance until the conclusion of the hearing which shall be conducted under such rules as the Commission shall deem appropriate. Upon the conclusion of said hearing the Commission may affirm, modify, or revoke said order of suspension.

§ 12.31 *Proceedings.* Proceedings for the suspension of an operator's license shall in all cases be initiated by the entry of an order of suspension. Respondent will be given notice thereof together with notice of his right to be heard and to contest the proceeding. The effective date of the suspension will not be specified in the original order but will be fixed by subsequent motion of the Commission in accordance with the conditions specified above. Notice of the effective date of suspension will be given respondent, who shall send his operator license to the office of the Commission in Washington, D. C., on or before the said effective date, or, if the effective date has passed at the time notice is received, the license shall be sent to the Commission forthwith.

EXAMINATIONS

§ 12.41 *When examination is required.* Examination is required for the issuance of a new amateur operator license, and for a change in class of operating privileges. Credit may be given, however, for certain elements of examination as provided in § 12.46.

§ 12.42 *Elements of examination.* The examination for amateur operator privileges comprises the following:

Element 1. Code test. Ability to send and receive, in plain language, messages in the International Morse Code at a speed of not less than 13 words per minute, free of omission or other error for a continuous period of at least 1 minute, during a test period of 5 minutes, counting five characters to the word, each numeral or punctuation mark counting as two characters.

Element 2. Amateur radio operation and apparatus, including telephone and telegraph.

Element 3. Provisions of treaties, statutes and regulations affecting amateurs.

Element 4. Advanced amateur telephony.

§ 12.43 *Elements required for various privileges.* The examination for class A privileges will include all of the examination elements specified in § 12.42.

The examination for class B and class C privileges will include elements 1, 2, and 3 specified in § 12.42.

§ 12.44 *Manner of conducting examination.* (a) The examinations for class A and class B privileges will be conducted by an authorized Commission employee or representative at locations and at times specified by the Commission.

(b) Each examination for class C privileges will be conducted and supervised by not more than two volunteer examiners, whom the Commission may designate or permit the applicant to select; in the event the examiner for the code test is selected by the applicant, such examiner shall be the holder of an amateur operator license with class A or B operating privileges, or shall have held, within the 5 years prior to the date of the examination, a commercial radiotelegraph operator license issued by the Commission or within that time shall have been employed in the service of the United States as the operator of a manually operated radiotelegraph station. The examiner for the written test shall be at least 21 years of age.

§ 12.45 *Additional examination for holders of class C operating privileges.*

(a) The Commission may require a licensee holding class C operating privileges to appear for a class B examination at a location designated by the Commission. If the licensee fails to appear for the class B examination when directed to do so, or fails to pass such examination, the class C operator license previously issued shall be subject to cancellation and, upon cancellation, a new license will not be issued for the class C privileges.

(b) Whenever the holder of class C amateur operating privileges changes his

actual residence or station location to a location where he would not have been eligible to apply for class C privileges in the first instance, or whenever a new examining location is established in an area within which the holder of class C amateur operating privileges would not have been eligible because of such examining location, to apply for class C privileges, such holder of class C privileges shall appear within 4 months thereafter at an examining location and time designated by the Commission and be examined for class B privileges. If, under such circumstances, the licensee fails to appear for class B examination, or fails to pass such examination, the class C operator license previously issued shall be subject to cancellation and, upon cancellation, a new license will not be issued for the class C privileges.

§ 12.46 *Examination credit.* (a) An applicant for class A privileges who holds an amateur operating license authorizing class B privileges will be required to pass only the examination element No. 4, advanced amateur telephony.

(b) An applicant for class A privileges will be given credit for examination element 4 if within 2 years prior to the receipt of his application by the Commission he held class A privileges.

(c) An applicant for any class of amateur privileges will be given credit for examination element 1 if within 5 years prior to the receipt of his application by the Commission he held a radiotelegraph first- or second-class operator license.

(d) No examination credit for other classes of licenses or privileges shall be allowed.

(e) A holder of an amateur operator license authorizing class C privileges will not thereby be accorded an abridged examination for either class B or class A privileges.

§ 12.47 *Examination procedure.* When taking an examination for amateur operator license, or for additional amateur operating privileges, the applicant shall write in longhand, by means of pen and ink. Diagrams shall be drawn either with pen and ink or with pencil; code tests shall be written or hand printed with either pen and ink or with pencil. Applicants unable to comply with these requirements, because of physical disability, may dictate their answers to examination questions, and if unable to draw required diagrams, may dictate a

detailed description essentially equivalent. If the examination or any part thereof is dictated, the examiner shall certify the nature of the applicant's disability and the name and address of the person(s) taking and transcribing the applicant's dictation.

§ 12.48 *Grading.* (a) Code tests are graded as "passed" or "failed," separately for sending and receiving tests. Failure to pass the required code test for either sending or receiving will terminate the examination.

(b) Seventy-four percent is the passing grade for written examinations. For the purpose of grading, elements 2 and 3 (required for class B and class C privileges) are considered to be a single examination and element 4 (required, in addition to the other elements, for class A privileges) is considered to be a separate examination.

§ 12.49 *Eligibility for reexamination.* An applicant who fails examination for amateur operator privileges may not take another examination for such privileges within 30 days, except that this limitation shall not apply to an examination for class B operating privileges following an examination for class C privileges.

AMATEUR RADIO STATIONS LICENSES

§ 12.61 *Eligibility for amateur station license.* A license for an amateur station will be issued in response to proper application therefor to a licensed amateur operator who has made a satisfactory showing of control of the transmitting station for which license is desired and of control of the specific premises upon which all of the station apparatus is to be located, at a designated fixed location. An amateur station license may be issued to an individual, not a licensed amateur operator (other than an alien or a representative of an alien or of a foreign government), who is in charge of a proposed amateur station located in approved public quarters and established for training purposes in connection with the armed forces of the United States, but not operated by the United States Government.

§ 12.62 *Eligibility of corporations or organizations to hold license.* An amateur station license will not be issued to a school, company, corporation, association, or other organization, nor for their use except that in the case of a bona fide

amateur radio organization or society, a station license may be issued to a licensed amateur operator as trustee for such society.

§ 12.63 *Application for amateur station license.* (a) Each application for an amateur station license shall comply with the Commission's Rules and Regulations and shall be made in writing, subscribed and verified on FCC Form No. 610 (application for amateur operator and/or station license). FCC Form No. 602 should be used where the applicant is in charge of a proposed amateur station located in approved public quarters and established for training purposes in connection with the armed forces of the United States, but not operated by the United States Government.

(b) One application and all papers incorporated therein and made a part thereof shall be submitted for each amateur station license and shall be filed with the district field office of the Commission if personal appearance is required for operator examination in connection with the application for station license. If personal appearance is not required, the station application shall be sent to the Commission, Washington 25, D. C.

§ 12.64 *Location of station.* (a) Every amateur station shall have a fixed transmitter location. Only one fixed transmitter location will be authorized and will be designated on the license for each amateur station, except that when remote control is authorized, the location of the remote control position as well as the location of the remotely controlled transmitter shall be considered as fixed transmitter locations and will be so designated on the station license. Unless remote control of the transmitting apparatus is authorized, such apparatus shall be operated only by a duly licensed amateur radio operator present at the location of such apparatus.

(b) Authority for operation of an amateur station with the licensed operator on duty at a specific remote control point in lieu of the remote transmitter location may be granted upon filing an application for a modified station license on FCC Form No. 610 or FCC Form No. 602, as appropriate, and provided that the following conditions are met:

(1) The remote control point as well as the remotely controlled transmitter,

shall be located on premises controlled by the licensee.

(2) The remotely controlled transmitter shall be so installed and protected that it is inaccessible to other than duly authorized persons.

(3) In addition to the requirements of § 12.68 a photocopy of the amateur station license shall be posted in a conspicuous place at the location of the remotely controlled transmitter.

(4) Means shall be provided at the control point to permit the continuous monitoring of the emissions of the remotely controlled transmitter, and it shall be continuously monitored when in operation.

(5) Means shall be provided at the remote control point immediately to suspend the radiation of the transmitter when there is any deviation from the terms of the station license or from the rules governing amateur radio service.

(6) In the event that operation of an amateur transmitter from a remote control point by radio is desired, an application for a modified station license on FCC Form No. 610 or FCC Form No. 602, as appropriate, should be submitted with a letter requesting authority to operate in such a manner stating that the controlling transmitter at the remote location will operate within amateur frequency bands 420 megacycles or higher and that there will be full compliance with § 12.64 (b) (1) through (5). Supplemental statements and diagrams should accompany the application and show how radio remote control will be accomplished and what means will be employed to prevent unauthorized operation of the transmitter by signals other than those from the controlling unit. There should be included complete data on control channels, relays and functions of each, directional antenna design for the transmitter and receiver in the control circuit, and means employed for turning on and off the main transmitter from the remote control location.

(c) An amateur transmitter may be operated from a remote control point in lieu of the remote transmitter location without special authorization by the Commission when there is direct mechanical control or direct electrical control by wired connections of the transmitter from a point located in the same or closely adjoining building or structure provided there is full compliance with

the conditions set forth in § 12.64 (b) (1) through (5).

§ 12.65 *License period.* The license for an amateur station is valid normally for a period of 5 years from the date of issuance of a new, renewed, or modified license.

§ 12.66 *Authorized apparatus.* An amateur station license authorizes the use under control of the licensee of all transmitting apparatus at the fixed location specified in the station license which is operated on any frequency, or frequencies allocated to the amateur service, and in addition authorizes the use, under control of the licensee, of portable and mobile transmitting apparatus operated at other locations.

§ 12.67 *Renewal of amateur station license.* An amateur station license may be renewed upon proper application filed not more than 120 days prior to date of expiration of such license and not later than the date of expiration.

§ 12.68 *Availability of station license.* The original license of each amateur station or a photocopy thereof shall be posted in a conspicuous place in the room occupied by the licensed operator while the station is being operated at a fixed location or shall be kept in his personal possession. When the station is operated at other than a fixed location, the original station license or a photocopy thereof shall be kept in the personal possession of the station licensee (or a licensed representative) who shall be present at the station while it is being operated as a portable or mobile station. The original station license shall be available for inspection by any authorized Government official at all times while the station is being operated and at other times upon request made by an authorized representative of the Commission, except when such license has been filed with application for modification or renewal thereof, or has been mutilated, lost, or destroyed, and application has been made for a duplicate license in accordance with § 12.26.

§ 12.69 *Revocation of station license.* Whenever the Commission shall institute a revocation proceeding against the holder of any radio station license under section 312 (a) of the Communications Act of 1934, as amended, it shall initiate said proceeding by serving upon said licensee an order of revocation effective not less than 15 days after written notice thereof

is given the licensee. The order of revocation shall contain a statement of the grounds and reasons for such proposed revocation and a notice of the licensee's right to be heard by filing with the Commission a written request for hearing within 15 days after receipt of said order. Upon filing of such written request for hearing by said licensee the order of revocation shall stand suspended and the Commission will set a time and place for hearing and shall give the licensee and other interested parties notice thereof. If no request for hearing on any order of revocation is made by the licensee against whom such an order is directed within the time hereinabove set forth, the order of revocation shall become final and effective, without further action of the Commission. When any order of revocation has become final, the person whose license has been revoked shall forthwith deliver the station license in question to the Engineer in Charge of the district in which the licensee resides.

§ 12.70 *Modification of station license.* (a) Whenever the Commission shall determine that public interest, convenience, and necessity would be served, or any treaty ratified by the United States will be more fully complied with, by the modification of any radio station license either for a limited time, or for the duration of the term thereof, it shall issue an order for such licensee to show cause why such license should not be modified.

(b) Such order to show cause shall contain a statement of the grounds and reasons for such proposed modification, and shall specify wherein the said license is required to be modified. It shall require the licensee against whom it is directed to be and appear at a place and time therein named, in no event to be less than 30 days from the date of receipt of the order to show cause why the proposed modification should not be made and the order of modification issued.

(c) If the licensee against whom the order to show cause is directed does not appear at the time and place provided in said order, a final order of modification shall issue forthwith.

CALL SIGNS

§ 12.81 *Assignment of call signs.* (a) The call signs of amateur stations will be assigned systematically by the Commission with the following exceptions:

(1) A specific unassigned call sign may be reassigned to the most recent holder thereof;

(2) A specific unassigned call sign may be assigned to a previous holder if not under license during the past 5 years;

(3) A specific unassigned call sign may be assigned to an amateur organization in memoriam to a deceased member and former holder thereof;

(4) A specific call sign may be temporarily assigned to a station connected with an event, or events, of general public interest;

(5) An unassigned "two-letter call" (a call sign having two letters following the numeral) may be assigned to a previous holder of a "two-letter call."

(b) An amateur call sign will consist of a sequence of one or two letters, a numeral designating the call sign area, and two or three letters. The call sign areas are as follows:

No.

1. Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.
2. New York, New Jersey.
3. Pennsylvania, Delaware, Maryland, District of Columbia.
4. Virginia, North and South Carolina, Georgia, Florida, Alabama, Tennessee, Kentucky, Puerto Rico and Virgin Islands.
5. Mississippi, Louisiana, Arkansas, Oklahoma, Texas, New Mexico.
6. California, Hawaii and Pacific possessions except those included in area 7.
7. Oregon, Washington, Idaho, Montana, Wyoming, Arizona, Nevada, Utah, Alaska and adjacent islands.
8. Michigan, Ohio, West Virginia.
9. Wisconsin, Illinois, Indiana.
10. Colorado, Nebraska, North and South Dakota, Kansas, Minnesota, Iowa, Missouri.

§ 12.82 *Transmissions of call signs.*

(a) An operator of an amateur station shall transmit the call sign of the station called or being worked and the call sign assigned the station which he is operating at the beginning and end of each transmission and at least once every 10 minutes during every transmission of more than 10 minutes' duration. In the case of stations conducting an exchange of several transmissions in sequence, with each transmission less than 3 minutes' duration, the call signs of the communicating stations need be transmitted only once every 10 minutes of operation as well as at the beginning and at the termination of the correspondence.

(b) In addition to complying with the requirements of paragraph (a) of this section, an operator of an amateur station operated as a portable or mobile

station using radiotelegraphy shall transmit immediately after the call sign of such station, the fraction-bar character ($\overline{\text{DN}}$) followed by the number of the amateur call sign area in which the portable or mobile amateur station is then being operated, as for example:

Example 1. Portable or mobile amateur station operating in the third amateur call sign area calls a fixed amateur station: W1ABC W1ABC W1ABC DE W2DEF $\overline{\text{DN}}$ 3 W2DEF $\overline{\text{DN}}$ 3 W2DEF $\overline{\text{DN}}$ 3 AR.

Example 2. Fixed amateur station answers the portable or mobile amateur station: W2DEF W2DEF W2DEF DE W1ABC K.

Example 3. Portable or mobile amateur station calls a portable or mobile amateur station:

W3GHI W3GHI W3GHI DE W4JKL $\overline{\text{DN}}$ 4 W4JKL $\overline{\text{DN}}$ 4 W4JKL $\overline{\text{DN}}$ 4 AR.

When telephony is used, the call sign of the station shall be preceded by the words "this is" or the word "from" instead of the letters "de," followed by an announcement of the geographical location in which the portable or mobile station is being operated.

Example 4. Portable or mobile amateur radio-telephone station operating in the third call area calls a fixed amateur station: W1ABC W1ABC W1ABC "this is" or the word "from" W2DEF W2DEF W2DEF operating portable (or mobile) 3 miles north of Bethesda, Md., over.

(c) When telephony is used, the transmission of call signs prescribed by paragraphs (a) and (b) of this section may be made by the person transmitting by voice in lieu of a duly licensed operator provided the licensed operator maintains the control required by § 12.28.

(d) When using telephony, phonetic aids to identify the call sign of the station may be employed.

(e) In addition to complying with the requirements of paragraph (a) of this section, an operator of an amateur station operated as a mobile station aboard a vessel on the high seas, or aboard an aircraft en route on an international voyage, shall, when the vessel or aircraft is outside the 10 call sign areas prescribed by the Commission in § 12.81 (b), comply with the following calling procedure:

(1) *Mobile operations aboard a vessel.*

(i) When using telegraphy the amateur operator shall transmit immediately after the call sign of the station the fraction bar $\overline{\text{DN}}$ followed by the designator MM to indicate that the station is being operated as a mobile station aboard a vessel. In addition, the name of the vessel and its approximate geographical

location shall be transmitted at the end of each transmission immediately prior to signing off. If the vessel does not have a name, the number of the vessel shall be transmitted in lieu of the name of the vessel.

(ii) When using telephony the call sign of the station shall be preceded by the words "this is", or the word "from" followed by the words "maritime mobile", to indicate that the station is being operated as a mobile station aboard a vessel. In addition, the name of the vessel and its approximate geographical location shall be transmitted at the end of each transmission immediately prior to signing off. If the vessel does not have a name, the number of the vessel shall be transmitted in lieu of the name of the vessel.

(2) Mobile operations aboard aircraft.

(i) When using telegraphy the amateur operator shall transmit immediately after the call sign of the station the fraction bar DN followed by the designator AM to indicate that the station is being operated as a mobile station aboard an aircraft. In addition, the number of the aircraft and its approximate geographical location shall be transmitted at the end of each transmission immediately prior to signing off.

(ii) When using telephony the call sign of the station shall be preceded by the words "this is", or the word "from" followed by the words "aeronautical mobile", to indicate that the station is being operated as a mobile station aboard an aircraft. In addition, the number of the aircraft and its approximate geographical location shall be transmitted at the end of each transmission immediately prior to signing off.

PORTABLE AND MOBILE STATIONS

§ 12.91 *Requirements for portable and mobile operation.* (a) Within the continental limits of the United States, its territories, or possessions, an amateur station may be operated as either a portable or a mobile station on any frequency authorized and available for the amateur radio service. Whenever portable operation is, or is likely to be, for an over-all period in excess of 48 hours away from the fixed transmitter location designated in the station license, the licensee shall give prior written notice to the Engineer in Charge of the radio inspection district in which such portable operation is intended. This notice is required even

though the station is, or is likely to be, operated during any part of this over-all period at the fixed transmitter location. Whenever mobile operation is, or is likely to be, for a period in excess of 48 hours without return to the fixed transmitter location designated in the station license, the licensee shall give prior written notice to the Engineer in Charge of the radio inspection district in which such mobile operation is intended. The notice required for either portable or mobile operation shall state the station call sign, the name of the licensee, the date or dates of proposed operation and the contemplated portable station locations, or mobile station itinerary, as specifically as possible. An amateur station operated under the provisions of this section shall not be operated during any period exceeding 1 month away from the fixed station location designated in the station license without giving additional notice to the Engineer in Charge of the radio inspection district in which the station is intended to be further operated, nor for more than four consecutive periods of 1 month each as portable at the same location. Mobile operation without return to the fixed transmitter location may be continued beyond the four consecutive periods of 1 month each provided that the above mentioned notice of mobile operation is given each month.

(b) Outside the continental limits of the United States, its territories or possessions, an amateur station may be operated as portable or mobile only in the amateur band 28.0 to 29.7 Mc. Within areas under the jurisdiction of a foreign government, operation is also limited to this band and then only with the permission of that government. Whenever such portable or mobile operation is, or is likely to be, for a period in excess of 48 hours away from the continental limits of the United States, its territories or possessions, the licensee shall give prior written notice to the Engineer in Charge of the radio inspection district in which the fixed transmitter site designated in the station license is located. Only one such notice shall be required during any continued absence from the continental limits of the United States, its territories, or possessions.

§ 12.93 *Special provisions for non-portable stations.* The specific provisions of this part relative to portable

stations are not applicable to a nonportable station except that:

(a) An amateur station that has been moved from one permanent location to another permanent location may be operated at the latter location, in accordance with the provisions governing portable stations (including notice to the Engineer in Charge of the district in which the station is located) for a period not exceeding four consecutive months, but in no event beyond the expiration date of the license, provided a formal application for modification of license to change the permanent location has been filed with the Commission.

(b) The licensee of an amateur station who changes residence temporarily and moves his amateur station to a temporary location associated with his temporary residence, or the licensee-trustee for an amateur radio society which changes the normal location of its amateur station to a different and temporary location may use the station at the temporary location if the station is to remain there for a period of not more than 4 months and the following requirements are met:

(1) Advance notice in writing shall be given by the amateur station licensee or licensee-trustee to the Commission in Washington, D. C., and to the Engineer in Charge of the district in which the station is to be temporarily operated.

(2) Similar notice shall be given for each change in station location and for transfer of the station to the former permanent location, or to a new permanent location before the transmitting apparatus is operated.

(c) When the station is operated under the provisions of this section the calling procedure specified in § 12.82 shall be used, including transmissions of the fractional bar character when telegraphy is used followed by the number of the amateur call sign area in which the station is being operated. When telephony is used, an announcement shall be made of the geographical location in which the station is being operated.

§ 12.94 *Special provisions for mobile stations aboard ships or aircraft.* In addition to complying with all other applicable rules, an amateur mobile station operated on board a ship or aircraft must comply with all of the following special conditions: (a) The installation and

operation of the amateur mobile station shall be approved by the master of the ship or captain of the aircraft; (b) the amateur mobile station shall be separate from and independent of all other radio equipment, if any, installed on board the same ship or aircraft; (c) the electrical installation of the amateur mobile station shall be in accord with the rules applicable to ships or aircraft as promulgated by the appropriate government agency; (d) the operation of the amateur mobile station shall not interfere with the efficient operation of any other radio equipment installed on board the same ship or aircraft; and (e) the amateur mobile station and its associated equipment, either in itself or in its method of operation, shall not constitute a hazard to the safety of life or property.

USE OF AMATEUR STATIONS

§ 12.101 *Points of communications.* An amateur station may be used to communicate only with other amateur stations, except that in emergencies or for test purposes it may also be used temporarily for communication with other classes of stations licensed by the Commission, and with United States Government stations. Amateur stations may also be used to communicate with any radio station other than amateur which is authorized by the Commission to communicate with amateur stations. Amateur stations may be used also for transmitting signals, or communications, or energy, to receiving apparatus for the measurement of emissions, temporary observation of transmission phenomena, radio control of remote objects, and for similar experimental purposes and for the purposes set forth in § 12.106.

§ 12.102 *No remuneration for use of station.* An amateur station shall not be used to transmit or receive messages for hire, nor for communication for material compensation, direct or indirect, paid or promised.

§ 12.103 *Broadcasting prohibited.* Subject to the provisions of § 12.106, an amateur station shall not be used to engage in any form of broadcasting, that is, the dissemination of radio communications intended to be received by the public directly or by the intermediary of relay stations, nor for the retransmission by automatic means of programs or signals emanating from any class of station other than amateur. The foregoing provision shall not be construed to prohibit

amateur operators from giving their consent to the rebroadcast by broadcast stations of the transmissions of their amateur stations, provided, that the transmissions of the amateur stations shall not contain any direct or indirect reference to the rebroadcast.

§ 12.104 *Radiotelephone tests.* The transmission of music by an amateur station is forbidden. However, single audiofrequency tones may be transmitted for test purposes of short duration for the development and perfection of amateur radiotelephone equipment.

§ 12.105 *Codes and ciphers prohibited.* The transmission by radio of messages in codes or ciphers in domestic and international communications to or between amateur stations is prohibited. All communications regardless of type of emission employed shall be in plain language except that generally recognized abbreviations established by regulation or custom and usage are permissible as are any other abbreviations or signals where the intent is not to obscure the meaning but only to facilitate communications.

§ 12.106 *One-way communications.* In addition to the experimental one-way transmissions permitted by § 12.101, the following kinds of one-way communications, addressed to amateur stations, are authorized and will not be construed as broadcasting: (a) Emergency communications, including bona-fide emergency drill practice transmissions; (b) information bulletins consisting solely of subject matter having direct interest to the amateur radio service as such; (c) round-table discussions or net-type operations where more than two amateur stations are in communication, each station taking a turn at transmitting to other station(s) of the group; and (d) code practice transmissions intended for persons learning or improving proficiency in the International Morse Code.

ALLOCATION OF FREQUENCIES¹

§ 12.111 *Frequencies and types of emission for use of amateur stations.* (a) Subject to the limitations and restrictions set forth in this section and in § 12.114, the following frequency bands

and types of emissions are allocated and available for amateur station operation as follows:

(1) 1750 to 2050 kc. Not available for use.

(2) 3500 to 4000 kc. Use of this band is restricted to amateur radio stations as follows:

(i) 3500 to 4000 kc, using type A1 emission, to those stations located within the continental limits of the United States, the Territories of Alaska and Hawaii, Puerto Rico, the Virgin Islands and all United States possessions lying west of the Territory of Hawaii to 170° west longitude.

(ii) 3850 to 4000 kc, using type A3 emission, to those stations located within the continental limits of the United States, the Territories of Alaska and Hawaii, Puerto Rico, the Virgin Islands and all United States possessions lying west of the Territory of Hawaii to 170° west longitude, subject to the further restriction that type A3 emission may be used only by an amateur station which is licensed to an amateur operator holding Class A privileges and then only when operated and controlled by an amateur operator holding Class A privileges.

(3) 7000 to 7300 kc, using type A1 emission.

(4) 14000 to 14400 kc, using type A1 emission, and on frequencies 14200 to 14300 kc, type A3 emission, subject to the restriction that type A3 emission may be used only by an amateur station which is licensed to an amateur operator holding Class A privileges and then only when operated and controlled by an amateur operator holding Class A privileges.

(5) 27.160 to 27.430 Mc, using types A0, A1, A2, A3, and A4 emission and also special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques), subject to such interference as may result from the emissions of industrial, scientific and medical devices within 160 kc of the frequencies 27.120 and 27.320 Mc.

(6) 28.0 to 29.7 Mc, using type A1 emission, and on frequencies 28.5 to 29.7 Mc, using type A3 emission, and on frequencies 29.0 to 29.7 Mc, using special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

¹ The assignment and use of all frequencies below 25 megacycles contained in these regulations are subject to change in accordance with the Commission's final report of allocations below 25 megacycles, in Docket Proceeding No. 6651.

(7) 50.0 to 54.0 Mc, using types A1, A2, A3, and A4 emission and, on frequencies 52.5 to 54.0 Mc, special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

(8) 144 to 148 Mc, using types A0, A1, A2, A3, and A4 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

(9) 220 to 225 Mc, using types A0, A1, A2, A3, and A4 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques), provided that until January 1, 1952, if this band is required for distance measuring equipment at certain United States gateways and Canadian border locations, amateurs within interference range of those gateways and locations shall, after publication by the Commission of an order designating the areas involved, cease to use this band, but shall be entitled in lieu thereof to use the band 235 to 240 Mc.

(10) 235 to 240 Mc, using types A0, A1, A2, A3, and A4 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques) until January 1, 1952, provided that commencing with June 9, 1948, this band may be used only as a substitute for the band 220 to 225 Mc in those cases in which the band 220 to 225 Mc may not be used, as provided in subparagraph (9) of this paragraph.

(11) 420 to 450 Mc, using types A0, A1, A2, A3, A4, and A5 emissions and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques). Peak antenna power shall not exceed 50 watts in order to minimize interference to aircraft altimeters temporarily allocated to this band.

(12) 1215 to 1300 Mc using types A0, A1, A2, A3, A4, and A5 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques).

(13) 2300 to 2450 Mc, 3300 to 3500 Mc, 5650 to 5925 Mc, 10,000 to 10,500 Mc, 21,000 to 22,000 Mc, and any frequency or frequencies above 30,000 Mc, using on these frequencies types A0, A1, A2, A3, A4, A5 emission and special emission for frequency modulation (radiotelephone transmissions and radiotelegraph transmissions employing carrier shift or other frequency modulation techniques), and pulse emission. Operations in the frequency bands 2300 to 2450 Mc and 5650 to 5925 Mc are subject to such interference between 2400 and 2450 Mc and between 5775 and 5925 Mc, respectively, as may result from emissions of industrial, scientific and medical devices on the frequencies 2450 and 5850 Mc, respectively.

§ 12.113 *Individual frequency not specified.* Transmissions by an amateur station may be on any frequency within any authorized amateur band. Sideband frequencies resulting from keying or modulating a carrier wave shall be confined within the authorized amateur band.

§ 12.114 *Types of emission.* (a) Type A0 emission, where not specifically designated in the bands listed in § 12.111, may be used for short periods of time when required for authorized remote control purposes or for experimental purposes. However, these limitations do not apply where type A0 emission is specifically designated.

(b) Narrow band frequency or phase modulation may be used, in addition to the types of emission specifically designated in § 12.111, by certain amateur stations for radiotelephone communication until further order of the Commission, but in no event beyond July 31, 1949 as follows:

(1) Amateur stations licensed to and operated by Class A amateur operators in the frequency bands 3850 to 3900 kc and 14200 to 14250 kc; and

(2) Amateur stations licensed to and operated by all classes of amateur operators in the frequency bands 28.5 to 29.0 Mc and 51.0 to 52.5 Mc and all frequency bands where "special emission for frequency modulation" (wide band FM) are presently authorized.

(c) The authorization provided by paragraph (b) of this section, is subject to the conditions that the band-width of the modulated carrier shall not exceed the band-width occupied by an ampli-

tude-modulated carrier of the same audio characteristics, and that the purity and stability of such emissions shall be maintained in accordance with the requirements of § 12.133.

EQUIPMENT AND OPERATIONS

§ 12.131 *Maximum authorized power.* Except on frequencies within the band 420 to 450 megacycles (where peak antenna power shall not exceed 50 watts), each amateur transmitter may be operated with a power input not exceeding 1 kilowatt to the plate circuit of the final amplifier stage of an amplifier-oscillator transmitter or to the plate circuit of an oscillator transmitter. An amateur transmitter operating with a power input exceeding 900 watts to the plate circuit shall provide means for accurately measuring the plate power input to the vacuum tube or tubes supplying power to the antenna.

§ 12.132 *Power supply to transmitter.* The licensee of an amateur station using frequencies below 144 megacycles shall use adequately filtered direct-current plate power supply for the transmitting equipment to minimize modulation from this source.

§ 12.133 *Purity and stability of emissions.* Spurious radiation from an amateur station being operated with a carrier frequency below 144 megacycles shall be reduced or eliminated in accordance with good engineering practice. This spurious radiation shall not be of sufficient intensity to cause interference in receiving equipment of good engineering design including adequate selectivity characteristics, which is tuned to a frequency or frequencies outside the frequency band of emission normally required for the type of emission being employed by the amateur station. In the case of A-3 emission, the amateur transmitter shall not be modulated to the extent that interfering spurious radiation occurs, and in no case shall the emitted carrier wave be amplitude-modulated in excess of 100 percent. Means shall be employed to insure that the transmitter is not modulated in excess of its modulation capability for proper technical operation. For the purposes of this section a spurious radiation is any radiation from a transmitter which is outside the frequency band of emission normal for the type of transmission employed, including any component whose frequency is an integral multiple or submultiple of the car-

rier frequency (harmonics and subharmonics), spurious modulation products, key clicks, and other transient effects, and parasitic oscillations. When using amplitude modulation on frequencies below 144 megacycles, simultaneous frequency modulation is not permitted and when using frequency modulation on frequencies below 144 megacycles simultaneous amplitude modulation is not permitted. The frequency of the emitted carrier wave shall be as constant as the state of the art permits.

§ 12.134 *Modulation of carrier wave.* Except for brief tests or adjustments and except for operation in the band 27.160 to 27.430 megacycles, an amateur radiotelephone station shall not emit a carrier wave on frequencies below 144 megacycles unless modulated for the purpose of communication.

§ 12.135 *Frequency measurement and regular check.* The licensee of an amateur station shall provide for measurement of the emitted carrier frequency or frequencies and shall establish procedure for making such measurement regularly. The measurement of the emitted carrier frequency or frequencies shall be made by means independent of the means used to control the radio frequency or frequencies generated by the transmitting apparatus and shall be of sufficient accuracy to assure operation within the amateur frequency band used.

§ 12.136 *Logs.* Each licensee of an amateur station shall keep an accurate log of station operation, including the following:

(a) The date and time of each transmission. (The date need only be entered once for each day's operation. The expression "time of each transmission" means the time of making a call and need not be repeated during the sequence of communication which immediately follows; however, an entry shall be made in the log when signing off so as to show the period during which communication was carried on.)

(b) The signature of each licensed operator who manipulates the key of a radiotelegraph transmitter or the signature of each licensed operator who operates a transmitter of any other type and the name of any person not holding an amateur operator license who transmits by voice over a radiotelephone transmitter. The signature of the operator need only be entered once in the

log, in those cases when all transmissions are made by or under the supervision of the signatory operator, provided a statement to that effect also is entered. The signature of any other operator who operated the station shall be entered in the proper space for that operator's transmission.

(c) Call sign of the station called. (This entry need not be repeated for calls made to the same station during any sequence of communication, provided the time of signing off is given.)

(d) The input power to the oscillator, or to the final amplifier stage where an oscillator-amplifier transmitter is employed. (This need be entered only once provided the input power is not changed.)

(e) The frequency band used. (This information need be entered only once in the log for all transmissions until there is a change in frequency to another amateur band.)

(f) The type of emission used. (This need be entered only once until there is a change in the type of emission.)

(g) The location of the station (or the approximate geographical location of a mobile station) at the time of each transmission. (This need be entered only once provided the location of the station is not changed. However, suitable entry shall be made in the log upon changing the location. Where operating at other than a fixed location, the type and identity of the vehicle or other mobile unit in which the station is operated shall be shown.)

(h) The message traffic handled. (If record communications are handled in regular message form, a copy of each message sent and received shall be entered in the log or retained on file at the station for at least 1 year.)

§ 12.137 *Retention of logs.* The log shall be preserved for a period of at least 1 year following the last date of entry. The copies of record communications and station log required by § 12.136 shall be available for inspection by authorized representatives of the Commission.

SPECIAL CONDITIONS

§ 12.151 *Additional conditions to be observed by licensee.* In all respects not specifically covered by the regulations in this part each amateur station shall be operated in accordance with good engineering and good amateur practice.

§ 12.152 *Restricted operation.* (a) If the operation of an amateur station causes general interference to the reception of transmissions from stations operating in the domestic broadcast service when receivers of good engineering design including adequate selectivity characteristics are used to receive such transmissions and this fact is made known to the amateur station licensee, the amateur station shall not be operated during the hours from 8 p. m. to 10:30 p. m., local time, and on Sunday for the additional period from 10:30 a. m. until 1 p. m., local time, upon the frequency or frequencies used when the interference is created.

(b) In general, such steps as may be necessary to minimize interference to stations operating in other services may be required after investigation by the Commission.

§ 12.153 *Second notice of same violation.* In every case where an amateur station licensee is cited within a period of 12 consecutive months for the second violation of the provisions of §§ 12.111, 12.113, 12.114, 12.132, or 12.133, the station licensee, if directed to do so by the Commission, shall not operate the station and shall not permit it to be operated from 6 p. m. to 10:30 p. m., local time, until written notice has been received authorizing the resumption of full-time operation. This notice will not be issued until the licensee has reported on the results of tests which he has conducted with at least two other amateur stations at hours other than 6 p. m. to 10:30 p. m., local time. Such tests are to be made for the specific purposes of aiding the licensee in determining whether the emissions of the station are in accordance with the Commission's rules. The licensee shall report to the Commission the observations made by the cooperating amateur licensees in relation to the reported violations. This report shall include a statement as to the corrective measures taken to insure compliance with the rules.

§ 12.154 *Third notice of same violation.* In every case where an amateur station licensee is cited within a period of 12 consecutive months for the third violation of §§ 12.111, 12.113, 12.114, 12.132 or 12.133, the station licensee if directed by the Commission, shall not operate the station and shall not permit it to be operated from 8 a. m. to 12 midnight, local time, except for the purposes

of transmitting a prearranged test to be observed by a monitoring station of the Commission to be designated in each particular case. The station shall not be permitted to resume operation during these hours until the licensee is authorized by the Commission, following the test, to resume full-time operation. The results of the test and the licensee's record shall be considered in determining the advisability of suspending the operator license or revoking the station license, or both.

§ 12.155 *Answers to notices of violations.* Any licensee receiving official notice of a violation of the terms of the Communications Act of 1934, as amended, any legislative act, Executive order, treaty to which the United States is a party, or the Rules and Regulations of the Federal Communications Commission, shall, within 3 days from such receipt, send a written answer direct to the office of the Commission originating the official notice: *Provided, however,* That if an answer cannot be sent nor an acknowledgment made within such 3-day period by reason of illness or other unavoidable circumstances, acknowledgment and answer shall be made at the earliest practicable date with a satisfactory explanation of the delay. The answer to each notice shall be complete in itself and shall not be abbreviated by reference to other communications or answers to other notices. If the notice relates to some violation that may be due to the physical or electrical characteristics of transmitting apparatus, the answer shall state fully what steps, if any, are taken to prevent future violations, and if any new apparatus is to be installed, the date such apparatus was ordered, the name of the manufacturer, and promised date of delivery. If the notice of violation relates to some lack of attention or improper operation of the transmitter, the name of the operator in charge shall be given.

§ 12.156 *Operation in emergencies.* In the event of widespread emergency conditions affecting domestic communication facilities, the Commission may confer with representatives of the amateur service and others, and if deemed advisable, declare that a state of general communications emergency exists, designating the area or areas concerned (normally not exceeding 1,000 miles from center of the affected area), whereupon it shall be incumbent upon each amateur station in such area or areas to observe

the following restrictions for the duration of such emergency:

(a) Transmissions, other than those relating to relief work or other emergency service, such as amateur station networks can provide, shall not be made within the 1750–2050-kilocycle or 3500–4000-kilocycle bands. Incidental calling, testing and working, including casual conversation or remarks not pertinent or necessary to constructive handling of the emergency situation shall be prohibited.

(b) Frequencies within the bands 2025–2050-kilocycle, 3500–3525-kilocycle and 3975–4000-kilocycle shall be reserved for emergency calling channels, for initial calls from isolated stations or first calls concerning very important emergency relief matters or arrangements. All stations having occasion to use such channels shall change, as quickly as possible, to other frequencies for carrying on their communications.

(c) A 5-minute listening period for the first 5 minutes of each hour shall be uniformly observed for initial calls of major importance, both in the designated emergency calling channels and throughout the 1750–2050-kilocycle and 3500–4000-kilocycle bands. Only stations isolated or engaged in handling official traffic of the highest priority may continue with transmissions in these listening periods. No replies to calls or resumption of routine traffic shall be made in the 5-minute listening periods.

(d) The Commission may designate certain amateur stations to assist in promulgation of its emergency announcement, to police the 1750–2050-kilocycle and 3500–4000-kilocycle bands and to warn noncomplying stations observed to be operating therein. The operators of these observing stations shall report fully to the Commission the identity of any stations failing to comply, after notice, with any of the pertinent provisions of this section. Such designated stations will act in an advisory capacity when able to provide information on emergency circuits. Their policing authority shall be limited to the transmission of information from responsible official sources, and full reports of noncompliance which may serve as a basis for investigation and action under section 502 of the Communications Act. Such policing authority shall apply only to the 1750–2050-kilocycle and 3500–4000-kilocycle bands. Individual policing transmissions shall refer to this section by

number and shall specify briefly and concisely the date of the Commission's declaration and the area and nature of the emergency. Policing observer station shall not enter into discussions with other stations beyond the furnishing of essential facts relative to the emergency.

(e) The special conditions imposed under this section will cease to apply only after the Commission shall have declared such emergency to be terminated.

§ 12.157 *Obscenity, indecency, profanity.* No licensed radio operator or other person shall transmit communications containing obscene, indecent, or profane words, language, or meaning.

§ 12.158 *False signals.* No licensed radio operator shall transmit false or deceptive signals or communications by radio, or any call letter or signal which has not been assigned by proper authority to the radio station he is operating.

§ 12.159 *Unidentified communications.* No licensed radio operator shall transmit unidentified radio communications or signals.

§ 12.160 *Interference.* No licensed radio operator shall willfully or maliciously interfere with or cause interference to any radio communication or signal.

§ 12.161 *Damage to apparatus.* No licensed radio operator shall willfully damage, or cause or permit to be damaged, any radio apparatus or installation in any licensed radio station.

§ 12.162 *Fraudulent licenses.* No licensed radio operator or other person shall obtain or attempt to obtain, or assist another to obtain or attempt to obtain, an operator license by fraudulent means.

APPENDIX

EXAMINATION POINTS

Examinations for amateur radio operator licenses are conducted at the Commission's office in Washington, D. C., Monday through Friday, except holidays (office hours are from 8:30 a. m. to 5 p. m.), and at each radio district office of the Commission on the days designated by the Engineer in Charge of the office. Specific dates should be obtained from the Engineer in Charge. For a list of such offices see the following pages.

Examinations are also given frequently, by appointment, at the Commission's offices at the following points:

Savannah, Ga.	Juneau, Alaska
San Diego, Calif.	Anchorage, Alaska
Tampa, Fla.	

Examinations are also given at greater intervals at the places named below, which are visited for that purpose by Commission examiners from the district offices for such locations. For current schedules, exact time, place, and other details, inquiry should be addressed to the office conducting examinations at the chosen point.

QUARTERLY EXAMINATIONS

Birmingham, Ala.	Milwaukee, Wis.
Charleston, W. Va.	Nashville, Tenn.
Cincinnati, Ohio	Oklahoma City, Okla.
Cleveland, Ohio	Omaha, Nebr.
Columbus, Ohio	Pittsburgh, Pa.
Corpus Christi, Tex.	St. Louis, Mo.
Davenport, Iowa	Salt Lake City, Utah.
Des Moines, Iowa	San Antonio, Tex.
Fort Wayne, Ind.	Schenectady, N. Y.
Fresno, Calif.	Sioux Falls, S. Dak.
Grand Rapids, Mich.	Syracuse, N. Y.
Indianapolis, Ind.	Tulsa, Okla.
Knoxville, Tenn.	Williamsport, Pa.
Little Rock, Ark.	Winston-Salem, N. C.
Memphis, Tenn.	

SEMIANNUAL EXAMINATIONS

Albuquerque, N. Mex.	Klamath Falls, Oreg.
Amarillo, Tex.	Las Vegas, Nev.
Bakersfield, Calif.	Lihue, T. H.
Bangor, Maine.	Mobile, Ala.
Billings, Mont.	Phoenix, Ariz.
Bismarck, N. Dak.	Portland, Maine.
Boise, Idaho.	Reno, Nev.
Butte, Mont.	Roanoke, Va.
Cumberland, Md.	Spokane, Wash.
El Paso, Tex.	Tucson, Ariz.
Hartford, Conn.	Wichita, Kans.
Hilo, T. H.	Wilmington, N. C.
Jacksonville, Fla.	

ANNUAL EXAMINATIONS

Kaunakakai, T. H.	Walluku, T. H.
Lanai, T. H.	

Arrangements have also been made, including cooperation of other Federal agencies, for classes A and B examinations in outlying areas as follows:

Alaska: United States Signal Corps stations.

Guam: District Communications Officer, United States naval station.

Hawaii: At not exceeding one point on any island, by the Engineer in Charge (Honolulu).

RADIO DISTRICTS

Radio district	Address of the engineer in charge	Territory within district	
		States, etc.	Counties
1	1600 Customhouse, Boston 9, Mass.	Connecticut.....	All counties
		Maine.....	Do.
		Massachusetts.....	Do.
		New Hampshire.....	Do.
		Rhode Island.....	Do.
		Vermont.....	Do.
2	748 Federal Bldg., 641 Washington St., New York 14, N. Y.	New Jersey.....	Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union and Warren.
		New York.....	Albany, Bronx, Columbia, Delaware, Dutchess, Greene, Kings, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Schenectady, Suffolk, Sullivan, Ulster and Westchester.
3	Room 1005, New United States Customhouse, 2nd and Chestnut Sts., Philadelphia 6, Pa.	Delaware.....	New Castle.
		New Jersey.....	Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, and Salem.
		Pennsylvania.....	Adams, Berks, Bucks, Carbon, Chester, Cumberland, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Perry, Philadelphia, Schuylkill, and York.
4	508 Old Town Bank Bldg., Gay St. and Fallway, Baltimore 2, Md.	Delaware.....	Kent and Sussex.
		District of Columbia.....	All.
		Maryland.....	All counties.
		Virginia.....	Arlington, Clarke, Fairfax, Fauquier, Frederick, Loudoun, Page, Prince William, Rappahannock, Shenandoah, and Warren.
		West Virginia.....	Barbour, Berkeley, Grant, Hampshire, Hardy, Harrison, Jefferson, Lewis, Marion, Mineral, Monongalia, Morgan, Pendleton, Preston, Randolph, Taylor, Tucker, Upshur.
5	Room 402, New Post Office Bldg., Norfolk 10, Va.	North Carolina.....	All except district 6.
6	411 Federal Annex, Atlanta 3, Ga.	Virginia.....	All except district 4.
		Alabama.....	All except district 8.
		Georgia.....	All counties.
		North Carolina.....	Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Cleveland, Graham, Haywood, Henderson, Jackson, McDowell, Macon, Madison, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, and Yancey.
		South Carolina.....	All counties.
		Tennessee.....	Do.
	Suboffice, P. O. Box 77, 214 Post Office Bldg., York and Bull Sts., Savannah, Ga.		
7	P. O. Box 150, 312 Federal Bldg., Miami 1, Fla.	Florida.....	All except district 8.
	Suboffice, 410 P. O. Bldg., Florida Ave., Tampa 2, Fla.		
8	400 Audubon Bldg., New Orleans 16, La.	Alabama.....	Baldwin and Mobile.
		Arkansas.....	All counties.
		Florida.....	Escambia.
		Louisiana.....	All counties.
		Mississippi.....	Do.
		Texas.....	City of Texarkana only.
9	324 U. S. Appraisers Stores Bldg., 7300 Wingate St., Houston 11, Tex.	Texas.....	Angelina, Aransas, Atascosa, Austin, Bandera, Bastrop, Bee, Bexar, Blanco, Brazoria, Brazos, Brooks, Burleson, Caldwell, Calhoun, Cameron, Chambers, Colorado, Comal, DeWitt, Duval, Dimmit, Edwards, Fayette, Fort Bend, Frio, Galveston, Gillespie, Goliad, Gonzales, Grimes, Guadalupe, Hardin, Hays, Harris, Hidalgo, Jackson, Jasper, Jefferson, Jim Hogg, Jim Wells, Karnes, Kenedy, Kendall, Kerr, Kinney, Kleberg, LaSalle, Lavaca, Lee, Liberty, Live Oak, Matagorda, Madison, Maverick, McMullen, Medina, Montgomery, Nacogdoches, Newton, Nueces, Orange, Polk, Real, Refugio, San Augustine, San Jacinto, San Patricio, Sabine, Starr, Travis, Trinity, Uvalde, Val Verde, Victoria, Walker, Waller, Washington, Webb, Wharton, Willacy, Williamson, Wilson, Zapata, Zavala, and Tyler.

RADIO DISTRICTS—continued

Radio district	Address of the engineer in charge	Territory within district	
		States, etc.	Counties
10	Suboffice, P. O. Box 1527, 329 Post Office Bldg. 300 Willow St., Beaumont, Tex. P. O. Box 5238, 500 U. S. Terminal Annex Bldg., Houston and Jackson Sts., Dallas 2, Tex.	New Mexico..... Oklahoma..... Texas.....	All counties. Do. All except district 9 and the city of Texarkana.
11	539 U. S. Post Office and Courthouse Bldg., Temple and Spring Sts., Los Angeles 12, Calif.	Arizona..... California..... Nevada.....	All counties. Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura, Clark.
12	Suboffice, 230 U. S. Customhouse and Courthouse Bldg. Union and "F" Sts., San Diego 1, Calif. 323-A Customhouse San Francisco 26, Calif.	California..... Nevada.....	All except district 11. All except Clark.
13	406 Central Bldg., 530 S. W. 10th Ave., Portland 5, Oreg.	Idaho..... Oregon..... Washington.....	All except district 14. All counties. Wahkiakum, Cowlitz, Clark, Skamania, and Klickitat.
14	801 Federal Office Bldg., Seattle 4, Wash.	Idaho..... Montana..... Washington.....	Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone. All counties. All except district 13.
15	521 New Customhouse, 19th St. between California and Stout Sts., Denver 2, Colo.	Colorado..... Utah..... Wyoming..... Nebraska.....	All counties. Do. Do. Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Kimball, Morrill, Scotts Bluff, Sheridan, Sioux.
16	208 Uptown Post Office and Federal Courts Bldg., 5th and Washington Sts., St. Paul 2, Minn.	South Dakota..... Minnesota..... Michigan.....	Butte, Custer, Fall River, Lawrence, Meade, Pennington, Shannon, Washington. All counties. Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, and Schoolcraft.
17	838 U. S. Courthouse, 811 Grand Ave., Kansas City 6, Mo.	South Dakota..... North Dakota..... Wisconsin..... Iowa..... Kansas..... Missouri..... Nebraska.....	All except district 15. All counties. All except district 18. Do. All counties. Do. All except district 15.
18	246 U. S. Courthouse, 219 South Clark St., Chicago 4, Ill.	Illinois..... Indiana..... Iowa..... Wisconsin.....	All counties. Do. Allameekee, Buchanan, Cedar, Clayton, Clinton, Delaware, Des Moines, Dubuque, Fayette, Henry, Jackson, Johnson, Jones, Lee, Linn, Louisa, Muscatine, Scott, Washington, and Winneshiek. Brown, Columbia, Calumet, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Iowa, Jefferson, Kewaunee, Kenosha, Lafayette, Manitowoc, Marinette, Milwaukee, Ozaukee, Oconto, Outagamie, Racine, Richland, Rock, Sauk, Sheboygan, Walworth, Washington, Waukesha, and Winnebago.
19	1029 New Federal Bldg., Detroit 26, Mich.	Kentucky..... Kentucky..... Ohio..... Michigan..... West Virginia.....	All except district 19. Bath, Bell, Boone, Bourbon, Boyd, Bracken, Breathitt, Campbell, Carter, Clark, Clay, Elliott, Estill, Fayette, Fleming, Floyd, Franklin, Gallatin, Garrard, Grant, Greenup, Kenton, Harlan, Harrison, Jackson, Jessamine, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, Madison, Magoffin, Martin, Mason, McCreary, Menifee, Montgomery, Morgan, Nicholas, Owen, Owsley, Pendleton, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Scott, Wayne, Whitley, Wolfe, Woodford. All counties. All except district 16. All except district 4.

RADIO DISTRICTS—continued

Radio district	Address of the engineer in charge	Territory within district	
		States, etc.	Counties
20	328 Post Office Bldg., Ellicott and Swan Streets, Buffalo 3, N. Y.	New York.....	All except district 2.
21		Pennsylvania.....	All except district 3.
	609 Stangenwald Bldg., 119 Merchant St., Honolulu 1, T. H.	Territory of Hawaii and outlying Pacific possessions, except Alaska and adjacent islands.	
22	P. O. Box 2987, 322-323 Federal Bldg., San Juan 13, P. R.	Puerto Rico.....	
23	P. O. Box 1421, 7-8 Shattuck Bldg., Third and Seward Sts. Juneau, Alaska.	Virgin Islands.....	
	Suboffice, 53 U. S. P. O. and Court House, P. O. Box 644, Anchorage, Alaska.	Alaska.....	

EXTRACTS FROM GENERAL RADIO REGULATIONS
(Cairo Revision)

ARTICLE 5

Classification of Emissions

SECTION 1. Emissions shall be classified below according to the purpose for which they are used, assuming their modulation or their possible keying to be only in amplitude.

1. Continuous waves:

Type A₀. Waves the successive oscillations of which are identical under fixed conditions.⁴

Type A₁. Telegraphy on pure continuous waves. A continuous wave which is keyed according to a telegraph code.

Type A₂. Modulated telegraphy. A carrier wave modulated at one or more audible frequencies, the audible frequency or frequencies or their combination with the carrier wave being keyed according to a telegraph code.

Type A₃. Telephony. Waves resulting from the modulation of a carrier wave by frequencies corresponding to the voice, to music, or to other sounds.

Type A₄. Facsimile. Waves resulting from the modulation of a carrier wave by frequencies produced at the time of the scanning of a fixed image with a view to its reproduction in a permanent form.

Type A₅. Television. Waves resulting from the modulation of a carrier wave by frequencies produced at the time of the scanning of fixed or moving objects.⁵

NOTE: The band widths to which these emissions correspond are indicated in appendix 3.

2. Damped waves:

Type B. Waves composed of successive series of oscillations the amplitude of which,

⁴ These waves are used only in special cases, such as standard frequency emissions.

⁵ "Objects" is used here in the optical sense of the word.

after attaining maximum, decreases gradually, the wave trains being keyed according to a telegraph code.

SEC. 2. In the above classification, the presence of a carrier wave is assumed in all cases. However, such carrier wave may or may not be transmitted.

This classification does not contemplate exclusion of the use, by the administrations concerned, under specified conditions, of types of waves not included in the foregoing definitions.

APPENDIX 3

Table of Frequency-Band Widths Occupied by the Emissions

The frequency bands necessary for the various types of transmissions, at the present state of technical development, are indicated below. This table is based solely upon amplitude modulation. For frequency or phase modulation, the band widths necessary for the various transmissions are many times greater.

Type of transmission	Total width of the band in cycles for transmission with 2 side bands
A ¹ Continuous waves, no signaling.	Numerically equal to the telegraph speed in bauds for the fundamental frequency, 3 times this width for the 3rd harmonic, etc. (For a code of 8 time elements (dots or blanks) per letter and 48 time elements per word, the speed in bauds shall be equal to 0.8 times the speed in words per minute.)
A ₁ Telegraphy, pure, continuous wave.	
Morse code. Baudot code. Stop-start printer.	
Scanning-type printer.	300-1,000, for speeds of 50 words per minute, according to the conditions of operation and the number of lines scanned (for example, 7 or 12). (Harmonics are not considered in the above values.)
A ₂ Telegraphy modulated to musical frequency.	Figures appearing under A ₁ , plus twice the highest modulation frequency.

Type of transmission	Total width of the band in cycles for transmission with 2 side bands
A3 Commercial radiotelephony.	Twice the number indicated by the C. C. I. F. opinions (about 6,000 to 8,000). ¹
A4 Broadcasting..	15,000 to 20,000.
A4 Facsimile.....	Approximately the ratio between the number of picture components ² to be transmitted and the number of seconds necessary for the transmission.
A5 Television....	Approximately the product of the number of picture components ² multiplied by the number of pictures transmitted per second.

¹ It is recognized that the band width may be wider for multiple-channel radiotelephony and secret radiotelephony.

² Two picture components, one black and one white, constitute a cycle; thus, the modulation frequency equals one-half the number of components transmitted per second.

EXTRACTS FROM RADIO REGULATIONS

Annexed to the International Telecommunication Convention (Atlantic City, 1947)

ARTICLE 42¹ AMATEUR STATIONS

SECTION 1. Radiocommunications between amateur stations of different countries shall be forbidden if the administration of one of the countries concerned has notified that it objects to such radiocommunications.

SEC. 2. (1) When transmissions between amateur stations of different countries are permitted they must be made in plain language and must be limited to messages of a technical nature relating to tests and to remarks of a personal character for which, by reason of their unimportance, recourse to the public telecommunications service is not justified. It is absolutely forbidden for amateur stations to be used for transmitting international communications on behalf of third parties.

(2) The preceding provisions may be modified by special arrangements between the countries concerned.

SEC. 3. (1) Any person operating the apparatus in an amateur station must have proved that he is able to transmit, and to receive by ear, texts in Morse code signals. Administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 1000 (one thousand) Mc/s.

(2) Administrations shall take such measures as they judge necessary to verify the qualifications, from a technical point of view, of any person operating the apparatus of an amateur station.

SEC. 4. The maximum power of amateur stations shall be fixed by the administra-

¹ Article 42 of the Radio Regulations annexed to the International Telecommunication Convention (Atlantic City, 1947) becomes effective on January 1, 1949, at which time it supersedes Article 8 of the General Radio Regulations (Cairo Revision, 1938).

tions concerned, having regard to the technical qualifications of the operators and to the conditions under which these stations must work.

SEC. 5. (1) All the general rules of the Convention and of the present Regulations shall apply to amateur stations. In particular, the transmitting frequency must be as constant and as free from harmonics as the state of technical development for stations of this nature permits.

(2) During the course of their transmissions amateur stations must transmit their call sign at short intervals.

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D. C.

[Order No. 115-C]

At a meeting of the Federal Communications Commission held at its offices in Washington, D. C., on the 3rd day of January 1947;

Whereas the Commission has, by Orders 115, 115-A, 115-B, 130-P, adopted between May 25, 1943, and April 7, 1946, reinstated and extended certain amateur operator licenses issued on or between December 7, 1938, and December 7, 1943, so that the expiration dates of those amateur operator licenses fell within the period December 7, 1946, and December 7, 1947, and validated certain amateur station licenses for the term, as extended, of the amateur operator license held by the licensee of the station; and

Whereas it is now desirable to establish a clear and uniform understanding of the status of all amateur operator and station licenses and to eliminate the effects of certain misunderstandings that have occurred in connection with the application of the above-mentioned orders and to provide for the orderly processing of applications for new, renewed, or modified amateur licenses;

It is ordered, That all amateur operator licenses issued on or between December 7, 1938, and December 31, 1944, except amateur operator licenses heretofore at any time or hereafter suspended or voluntarily surrendered, are hereby extended, and if expired on or since December 7, 1946, are hereby reinstated and extended, until 1948, at 3 A. M., Eastern Standard Time, the same day and month as the date of issuance.

It is further ordered, That all amateur station licenses held by operators whose operator licenses are extended, or reinstated and extended, by this order, except amateur station licenses heretofore at any time or hereafter revoked or voluntarily surrendered, are hereby validated, and if expired on or since December 7, 1946, are hereby reinstated and validated, for the term, as extended, of the operator license held by the licensee of the station;

It is further found and ordered, That, whereas, authority for this order is contained in sections 303 (1) and (r) of the Communications Act of 1934, as amended, and the effect of the order is to extend for an additional period after December 7, 1946, the relief from certain restrictions as has been or now

is afforded by Commission Orders 115, 115-A, 115-B, and 130-F, and is noncontroversial, and it is in the public interest that this order be made effective immediately, notice and public procedure required by section 4 of the Administrative Procedure Act are, hereby, found unnecessary, and this order should be, and is hereby, made effective immediately.

By the Commission.

T. J. SLOWIE,
Secretary.

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON 25, D. C.

[Order No. 77-H]

At a session of the Federal Communications Commission, held at its office in Washington, D. C., on the 30th day of June 1947:

Whereas § 12.27 of the Commission's rules governing amateur radio service and § 13.28 of the Commission's rules governing commercial radio operators require a showing of service or use as a condition precedent to the renewal, respectively, of an amateur or commercial operator license; and

It appearing, that the Commission by its Order No. 77-G, dated December 17, 1946, suspended until June 30, 1947 § 12.27 of its rules governing amateur radio service and § 13.28 of its rules governing commercial radio operators, insofar as those sections require a showing of service or use as a condition precedent to the renewal, respectively, of an amateur or commercial operator license; and

It further appearing, that it would be advisable to extend for an additional period not to exceed one year the suspension of the showing of service or use requirement in order to provide a cushion for the full return to normal peacetime procedures;

It is ordered, That § 12.27 of the Commission's rules governing amateur radio service and § 13.28 of its rules governing commercial radio operators be, and they hereby are, suspended until further order of the Commission, but in no event beyond June 30, 1948.

It is further found and ordered, That, whereas, authority for this order is contained in sections 303 (l) and (r) of the Communications Act of 1934, as amended, and the effect of the order is to extend for an additional period after June 30, 1947, the relief from certain restrictions as now afforded by Commission Order No. 77-G, and is noncontroversial, and it is in the public interest that this order be made effective not later than July 1, 1947, notice and public procedure required by section 4 of the Administrative Procedure Act are, hereby, found unnecessary, and this order should be, and is hereby, made effective July 1, 1947.

By the Commission.

T. J. SLOWIE,
Secretary.

[13 F. R. 7405, as amended at 13 F. R. 9348]

Part 13—Commercial Radio Operators

GENERAL

- | | |
|------|-------------------------------|
| Sec. | |
| 13.1 | Licensed operators required. |
| 13.2 | Classes of licenses. |
| 13.3 | Dual holding of licenses. |
| 13.4 | Term of licenses. |
| 13.5 | Eligibility for new license. |
| 13.6 | Operator license, posting of. |
| 13.7 | Operators, place of duty. |

APPLICATIONS

- | | |
|-------|---|
| 13.11 | Procedure. |
| 13.12 | Special provisions, radiotelegraph first class. |

EXAMINATIONS

- | | |
|-------|--------------------------------------|
| 13.21 | Examination elements. |
| 13.22 | Examination requirements |
| 13.23 | Form of writing. |
| 13.24 | Passing mark. |
| 13.25 | New class, additional requirements. |
| 13.26 | Cancelling and issuing new licenses. |
| 13.27 | Eligibility for reexamination. |
| 13.28 | Renewal examinations and exceptions. |

CODE TESTS

- | | |
|-------|----------------------------------|
| 13.41 | Transmitting speed requirements. |
| 13.42 | Transmitting test procedure. |
| 13.43 | Receiving speed requirements. |
| 13.44 | Receiving test procedure. |
| 13.45 | Computing words or code groups. |

SCOPE OF AUTHORITY

- | | |
|-------|---|
| 13.61 | Operators' authority. |
| 13.62 | Special privileges. |
| 13.63 | Operator's responsibility. |
| 13.64 | Obedience to lawful orders. |
| 13.65 | Damage to apparatus. |
| 13.66 | Unnecessary, unidentified, or superfluous communications. |
| 13.67 | Obscenity, indecency, profanity. |
| 13.68 | False signals. |
| 13.69 | Interference. |
| 13.70 | Fraudulent licenses. |

MISCELLANEOUS

- | | |
|-------|---|
| 13.71 | Issue of duplicate or replacement licenses. |
| 13.72 | Exhibiting signed copy of application. |
| 13.73 | Verification card. |
| 13.74 | Posting as amended; requirements for operator. |
| 13.75 | Record of service and maintenance duties performed. |

SERVICE

- | | |
|-------|---|
| 13.91 | Endorsement of service record. |
| 13.92 | Aviation service endorsement. |
| 13.93 | Service acceptability. |
| 13.94 | Statement in lieu of service endorsement. |

AUTHORITY: §§ 13.1 to 13.94 issued under sec. 4, 48 Stat. 1066, as amended; 47 U. S. C. 154. Interpret or apply sec. 303, 48 Stat. 1032, as amended; 47 U. S. C. 303.